C. E. White Co.

Ohio Manufacturing Extension Partnership

Innovative New Product Design Saves Jobs and Increases Sales at C.E. White

Client Profile:
C.E. White Company tests, manufacturers and sells commercial, transit and school bus seating. Its R&D lab exposes bus seats to varying impacts, evaluating and analyzing the energy absorption characteristics of each seat. Because these seats are made for the general public, C.E. White has to meet strict federal motor vehicles guidelines as well as all state safety standards and regulations on its impact testing equipment. Located in New Washington, Ohio, the company employs 75 people.

Situation:
Impact tests are critical to C.E.White's business for validating seat design performance and demonstrating competitive advantages with its products. Test system consistency and stability during set-up and operation are vital for obtaining valid, repeatable data. However, the company's system was weakening in those areas, which meant multiple tests had to be repeated to obtain valid data, wasting valuable product development time and manpower. To avoid this repeat testing, the company hoped to update its Impact Test Station with a new design and approached CAMP Services, an office in Ohio affiliated with the Ohio Manufacturing Extension Partnership (OMEP), a NIST MEP network affiliate, and a division of the Manufacturing Advocacy & Growth Network (MAGNET), for assistance. The company also wanted a more flexible design to allow the testing area to accept various-sized seat configurations and orientations and set new industry benchmarks for the company to maintain its competitive advantage.

Solution:
The goal was to provide C.E. White with an innovative new product design capable of not only adapting to the changing form of the seats, but also of capturing accurate and real time data from the testing stations. CAMP Services' engineers researched and designed a new product with a mechanical impact testing device that could easily adapt to accept a wide range of product mix. The system that was designed has minimized safety hazards and eases the process by which the system can repeatedly perform its tests. By eliminating set-up and operational instabilities, the CAMP engineers standardized each test to significantly increase accuracy at each pass.

Results:
* Impact test system is user friendly, expandable to various sizes and configurations, and meets federal requirements.
* New product design offers varying degrees of processed information on command.

Testimonial:
"CAMP Services' new product design capabilities are terrific and met with the constraints we needed to comply with federal motor vehicle safety standards and guidelines as well as state regulations. I know

that we will call on CAMP again for any future projects we have."
Scott Hiler, Manager, Research and Development